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TECHNOLOGY CENTER R3700

# Olaf Vancura

Serial No. 09/372,560

Group Art Unit: 3711

Filed: June 6, 2001

Examiner: W. Pierce

For: KNOWLEDGE-BASED CASINO GAME AND METHOD THEREFOR

Commissioner for Patents  
Washington, DC 20231

Sir:

Submitted herewith in triplicate is Appellant's Appeal Brief in support of the Notice of Appeal filed August 22, 2002. Please charge the Appeal Brief fee of \$320.00 to Deposit Account 500417.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT, WILL & EMERY

Arthur J. Steiner

Registration No. 26,106

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**Date: February 24, 2003**

## TABLE OF CONTENTS

I.	REAL PARTY IN INTEREST .....	1
II.	RELATED APPEALS AND INTERFERENCES .....	1
III.	STATUS OF CLAIMS .....	2
IV.	STATUS OF AMENDMENTS .....	2
V.	SUMMARY OF THE INVENTION .....	2
VI.	ISSUE .....	5
VII.	GROUPING OF CLAIMS .....	6
VIII.	ARGUMENT .....	6
IX.	PRAYER FOR RELIEF.....	32
	APPENDIX (APPEALED CLAIMS 1, 2, 4 THROUGH 47, 49 through 55, 57, 58 and 130 through 132) .....	35

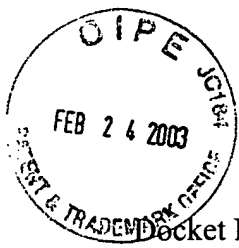
EXHIBIT 1 (Declaration of Olaf Vaccura executed 5/18/01).

EXHIBIT 2 (Declaration of John J. Grochowski executed 4/23/01).

EXHIBIT 3 (Declaration of Fredric E. Gushin executed 5/31/02).

EXHIBIT 4 ("Strictly Slots", October 2002, page 42)

EXHIBIT 5 ("Strictly Slots"/"The Future of Slots", September 2002, page 51).



Docket No. 48347-014

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of :  
Olaf Vancura :  
Serial No. 09/372,560 : Group Art Unit: 3711  
Filed: June 6, 2001 : Examiner: W. Pierce  
For: KNOWLEDGE-BASED CASINO GAME AND METHOD THEREFOR

**APPEAL BRIEF**

**RECEIVED**

**FEB 27 2003**

Commissioner for Patents  
Washington, DC 20231

**TECHNOLOGY CENTER R3700**

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed August 22, 2002.

**I. REAL PARTY IN INTEREST**

The real party in interest is Mikohn Gaming Corporation.

**II. RELATED APPEALS AND INTERFERENCES**

A notice of Appeal was filed on August 22, 2002 in Application Serial No. 09/875,753 (the '753 Application), which contains subject matter similar to the subject matter involved in this Appeal. An Appeal Brief is being filed in the '753 Application concurrently with this Appeal Brief. Appellant is not aware of any other related Appeal or of any related Interference.

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well known to mathematics and gaming."

## VII. GROUPING OF CLAIMS

The appealed claims do not stand or fall together as a group. Appellant separately argues the patentability of claims 1, 2 and 4 through 18 as a group (Group I); claims 19 through 24 as a group (Group II); claims 25 through 30 as a group (Group III); claims 42 through 55 and 57-58 as a group (Group IV); and claims 130 through 132 as a group (Group V).

## VIII. THE ARGUMENT

### 1. **The Rejection of Claims 1, 2, 4 through 30, 42 through 47, 49 through 55, 57 and 58 under 35 U.S.C. §102 for lack of novelty as evidenced by Walker.**

In the statement of the rejection, the Examiner asserted that Walker discloses a method corresponding to that claimed, **ignoring clear differences** in manipulative steps and asserting that the recited house advantage is inherent and also a matter of design. Appellant strenuously disagrees.

The **factual determination** of lack of novelty under 35 U.S.C. §102 requires the **identical** disclosure in a single reference of each element of a claimed invention, such that the identically claimed invention is placed into the recognized possession of one having ordinary skill in the art. *Elan Pharmaceuticals, Inc. v. Mayo Foundation*, \_\_F.3d\_\_, 64 USPQ2d 1292 (Fed. Cir. 2002); *Crown Operations International Ltd. v. Solutia Inc.*, 289 F.3d 1367, 62 USPQ2d 1917 (Fed. Cir. 2002). Further, in imposing a rejection under 35 U.S.C. §102, the Examiner is required to **specifically identify** wherein an applied reference is asserted to identically disclose **each** feature of the claimed invention. *In re Rijckaert*, 9 F.3d 1531, 28

*USPQ2d 1955 (Fed. Cir. 1993; Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., 730 F.2d 1452, 221 USPQ 481 (Fed. Cir. 1984); In re Rijckaert, supra.* Appellant submits that the Examiner failed to discharge that initial burden. Further, there are significant differences between each of the claimed inventions and Walker's method that scotch the factual determination that Walker identically describes any of the claimed inventions within the meaning of 35 U.S.C. §102.

### **Independent Claim 1 (Group I)**

The invention defined in independent claim 1 is directed to a method of playing a casino game, which method comprises a particular sequence of manipulative steps which include initially playing an underlying game of chance and, **after a bonus condition occurs** in the underlying game of chance, playing a knowledge-based game "**after playing the game of chance**", wherein the knowledge-based game has a separate payoff from the payoff of the underlying game of chance such that the payoff for the underlying game of chance of made **regardless** of the outcome of the knowledge-based game. Claim 1 also recites that the **combined play of both** the knowledge-based game and the game of chance has a house advantage within a **predetermined range** having set limits only based upon the correctness of the answers and the wager. **None of these features are disclosed or suggested by the allegedly anticipatory reference to Walker.** Indeed, as should be apparent from the following discussion, the Examiner committed **clear legal error in ignoring claim limitations.** *Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988); In re Miller, 441 F.2d 689, 169 USPQ 597 (CCPA 1971); In re Wilson, 424 F.2d 1382, 165 USPQ 494 (CCPA 1970).*

### Walker

Walker discloses an electronic gaming device designed to provide mental stimulation for a player during "dead time" when the wheels of a slot machine are spinning (column 3, lines 45 to 48). **While** the wheels of the slot machine are spinning, a trivia question is presented to the player to answer, **not "when a bonus condition occurs"** as in the claimed invention (column abstract; column 6, lines 42 through 45; sentence bridging columns 6 and 7 and first full paragraph in column 11), albeit an embodiment is disclosed wherein a predetermined period of time may be set to permit an answer subsequent to reel spinning. A correct answer of the trivia question increases the prize for the slot play, while apparently reducing the prize for slot play when an incorrect response to a trivia question is received. The player's answers directly affect the slot play payoff (if any payoff is obtained in the slot play).

### Differences Between the Claimed Invention and Walker

It is **not** apparent, and the Examiner **failed** to comply with the mandate of the Court of Appeals for the Federal Circuit<sup>2</sup> by **specifically identifying** wherein Walker identically discloses a method comprising each feature of the claimed invention, particularly:

1. playing a game of knowledge when a **bonus condition** occurs in a game of chance;
2. providing **separate payoffs** for the game of chance and for the knowledge based game;
3. providing a payoff from the game of chance **regardless** of and separate from the outcome of the knowledge-based game; and

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<sup>2</sup>

*In re Rijckaert, supra; Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., supra.*

4. a casino game wherein the combined play of both the knowledge-based bonus game with the underlying game of chance over time has a house advantage within a **predetermined range**, let alone a predetermined range having set limits only based upon the correctness of the answers and the wager.

In the November 6, 2001 Office Action (page 5), which is incorporated in the June 24, 2002 Final Office Action, the Examiner focuses on Walker's requirement for the trivia game to occur "while the reels are spinning" referring to column 3, line 26, and asserts it is "separate" from the game of chance. The Examiner further says that the house percentage is inherent.

Firstly, as noted above, the Examiner completely ignored the manipulative steps of the claimed invention and merely announced the determination of lack of novelty. Again, it is not apparent and the Examiner has not pointed out wherein Walker discloses: (1) playing a knowledge-based game when a **bonus condition** occurs in seating the underlying game of chance; (2) the notion of **separate payoffs** for the game of chance and knowledge-based game; (3) the notion of a payoff from the game of chance **regardless** of the outcome of the knowledge-based game; and (4) a house advantage in a **predetermined range** having set limits only based upon the correctness of the answers and the wager. *In re Rijckaert, supra; Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., supra.*

Secondly, the Examiner's retreat to inherency is of no avail, because it does not somehow create the manipulative steps which are lacking. As to the inherency of a "a predetermined range, let alone a predetermined range having set limits based on the correctness of the answers and the wager", the Examiner has **not** proffered any **factual** basis to justify invoking the doctrine of inherency. Inherency, of course, requires both certainty and art-recognition. *Elan*

*Pharmaceuticals v. Mayo Foundation, supra; Crown Operations v. International v. Solutia Inc., supra.* The Examiner has shown neither.

Applicants would refer to page 3 of the June 24, 2002 Final Office Action, last three full paragraphs. It appears the Examiner is attempting to justify rejections under 35 U.S.C. §102 for lack of novelty by hopping, skipping and jumping among no less than six different references, speaking in terms of "the art as a whole", considering claim limitations as "synergistic" and then concluding "It would be routine for one skilled in the art to either determine the house advantage or design the game to a specific house advantage or range." Suffice to say, the Examiner's meanderings are irrelevant to the **factual determination** of lack of novelty under 35 U.S.C. §102. Indeed, the Examiner's approach is, in effect an admission that, as a factual matter, Walker does **not** identically disclose the claimed invention within the meaning of 35 U.S.C. §102.

As previously argued, there are significant differences between the manipulative steps of the method defined in independent claim 1 and Walker's method that undermine the factual determination of lack of novelty under 35 U.S.C. §102. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 230 USPQ 81 (Fed. Cir. 1986). The Examiner failed to discharge the burden of proffering a factual basis to establish the certainty and art-recognition required to invoke the doctrine of inherency. *Elan Pharmaceuticals v. Mayo Foundation, supra; Crown Operations v. International v. Solutia Inc., supra.*

Accordingly, the Examiner rejection of claim 1 and the claims dependent thereon (Group I) under 35 U.S.C. §102 is **clearly factually erroneous**.



**Independent Claim 19 (Group II).**

Independent claim 19 is directed to a method comprising manipulative steps which include playing an underlying game of chance, stopping the game of chance, paying the winner if a winning combination occurs, playing a knowledge based bonus game after stopping the game of chance and when a bonus condition occurs in the underlying game of chance, paying the player the entitled payoff of the underlying game of chance regardless of the outcome of the knowledge-based game, and providing a house advantage within a predetermined range and underlying game having a set limit based at least upon all answers to all queries in the acknowledged-based game being always correct and the wager. **None** of these features are disclosed or suggested by Walker. Walker does **not** disclose a **bonus** condition. Walker does **not** disclose providing separate payoffs for the game of chance and the knowledge-based game. Walker does **not** disclose providing a payoff for the game of chance **regardless of** the outcome of the knowledge-based game. Walker does **not** disclose a house advantage for the combined knowledge-based bonus game and underlying game within a **predetermined range**, let alone the range as set forth in claim 19 which has a limit based at least upon answers to all queries in the knowledge-based game being always correct and the wager.

Thus, the Examiner's rejection of claim 19 and the claims dependent thereon (Group II) under 37 C.F.R. §102 is **clearly factually erroneous**.

**Independent claim 25 (Group III)**

The method defined in independent claim 25 comprises a sequence of manipulative steps which includes playing a knowledge-based bonus game upon occurrence of a bonus condition in an underlying game of chance, providing a payoff to the underlying game of chance when the

winning combination occurs regardless of the outcome of the knowledge-based game, wherein the separate play of the acknowledge-based game and underlying game of chance has a house advantage with a first set limit based on all answers to all queries being correct and a second limit based on all answers to all queries being guessed. None of these features are disclosed or suggested by Walker.

Thus, the Examiner's rejection of claim 25 and the claims dependent (Group III) under 35 U.S.C. §102 thereon is **clearly factually erroneous**.

#### **Independent Claim 42 (Group IV)**

The method defined in independent claim 42 comprises a sequence of manipulative steps which include initially playing a game of chance, providing a payoff when a winning combination occurs in the game of chance, stopping the game of chance when a bonus condition occurs and then playing a second knowledge-based bonus game, wherein the entitled payoff of the underlying game of chance is paid regardless of the outcome of the acknowledge-based game, and providing a house advantage within a predetermined range with a combined knowledge-based game and underlying game of chance, the predetermined range having a minimum house advantage based on all answers to all queries in the knowledge-based game being correct, a substantial portion of the range having a positive house advantage. It is not apparent and the Examiner has not pointed out wherein Walker discloses a method comprising any of these features, let alone all of these features.

Thus, the Examiner's rejection of claim 42 and the claims dependent thereon (Group IV) under 35 U.S.C. §102 is **clearly factually erroneous**.

### **Conclusion**

The above argued differences between the manipulative steps of each of the claimed methods and Walker's method undermine the factual determination that Walker identically describes any of the claimed inventions with the meaning of 35 U.S.C. §102. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc., supra*; *Kloster Speedsteel AB v. Crucible Inc., supra*. Appellant, therefore, respectfully submits that the Examiner's rejection of claims 1, 2, 4 through 30, 42 through 47, 49 through 55, 57 and 58 under 35 U.S.C. §102 for lack of novelty as evidenced by Walker is **clearly factually erroneous**.

### **2. The Rejection of Claims 1, 2, 4, 9 through 30, 42 through 47, 49 through 55, 57 and 58 under 35 U.S.C. §102 for lack of novelty as evidenced by Claypole et al.**

In the statement of the rejection, the Examiner asserted that Claypole et al. disclose a method corresponding to that claimed, asserting the house advantage is inherent while invoking design considerations. According to the paragraph bridging pages 5 and 6 of the November 6, 2001 Office Action, the required factual determination to establish lack of novelty and inherency was demoted to "a matter of common knowledge and common sense". Appellant strongly disagrees.

### **Claypole et al.**

Claypole et al. disclose a game machine of the conventional fruit-machine type having a reels display together with a video display screen. In operation, the player inserts coins and plays the fruit-machine game. If the player hits a winning combination, the player can collect the award, or if the trail is at a predetermined minimum, a feature routine can be initiated. The

player must first gamble the amount won by a card guessing game. If the player guesses correctly, the player can either collect the award or gamble again, or play a feature which, if won, provides a payoff.

Significantly, in order to reach a trivia question, which is only one of the types of display choices, a precise sequence of events must occur. First, the player must continue to play the fruit- machine game to hit certain "number" symbols to reach a predetermined minimum on the trail, which is clearly not a requirement of the present invention. The unidentified opportunities mentioned on page 3, lines et. seq. are not bonus conditions.

Secondly, the player in Claypole must continue to play to obtain a winning combination with a payoff. This is not a requirement of the claimed invention.

Thirdly, the player in Claypole must receive a first choice element. If the player declines, the player receives the payoff. If the player decides to gamble, the payoff is completely at risk in the video game play. If successful, the player receives an increased award. None of these features are involved in the claimed invention.

Fourth, the player in Claypole receives a second choice element. If the player declines, the player receives the increased award. If the player chooses to gamble, the increased award is fully at risk with the interactive game of chance or skill which may or may not be a trivia question.

Based upon the foregoing, it should be apparent that the Examiner seized upon a perceived similarity stemming from an interactive game of chance and trivia question. However, Claypole et al. neither disclose nor suggest a game machine which has a payoff from the first game of chance which is paid off **independently of what occurs in a subsequent game as in the claimed inventions**. Moreover, in accordance with the claimed inventions, there is **no**

**intervening game** between the game of chance and knowledge-based game which affects the payoff of the game of chance, and the payoffs for the underlying game of chance are made **regardless** of the outcome of the knowledge-based game. **The Examiner has completely ignored this requirement of claim 1** for always making the entitled payoff from the underlying game of chance.

Further, as noted above, in the game machine of Claypole et al. there is an **intervening** game of chance between the underlying game of chance and the skill or knowledge base game. In accordance with the claimed inventions, the player proceeds from an underlying game of chance **directly** to the knowledge based game **without any intervening risks**. The Examiner has **improperly ignored** this feature of claim 1. *Uniroyal, Inc. v. Rudkin-Wiley Corp., supra*.

It is also not apparent and the Examiner has not identified wherein Claypole et al. disclose or suggest the notion of a game of chance in combination with a knowledge-based bonus game having a house advantage within a particular range having set limits based upon the correctness of the answers in the wager. The Examiner again falls back on inherency. However, the factual basis to support the required certainty and art recognition is lacking. *Elan Pharmaceuticals v. Mayo Foundation, supra; Crown Operations v. International v. Solutia Inc., supra*. The Examiner's dissertation appearing in the paragraph bridging pages 5 and 6 of the November 6, 2001 Office Action would not appear to be particularly relevant to the factual determination of lack of novelty under 35 U.S.C. §102 which is the issue before the Honorable Board. Suffice to say, it is **not** apparent and the Examiner has **not** explained how the reference to Scarne's, which basically stands for the proposition that casinos make money, or the Examiner's delving into the level of ordinary skill, relates to the **factual** issue at hand.

**The separate patentability of each of Groups I, II, III and IV is separately advocated.** Each of independent claims 1, 19, 25 and 42 specifies that the payoff of the underlying game of chance is made regardless of the outcome of the knowledge based game, a requirement that cannot be fulfilled by Claypole et al. Each of independent claims 1, 19, 25 and 42 is directed to method which **precludes an intervening game** between the underlying game of chance and knowledge-based game from affecting the payoff from the game of chance. But such a precluded intervening game is a feature integral to the game disclosed by Claypole et al. Each of independent claims 1, 19, 25 and 42 requires the combined knowledge-based bonus game and underlying game of chance to have a house advantage within a particular range set by specified limits. It is not apparent and the Examiner has not pointed out wherein such a house advantage within a predetermined range is disclosed or suggested by Claypole et al. Nor has the Examiner proffered a sufficient factual basis upon which to predicate the conclusion that any such house advantage within a predetermined range is inherent in Claypole et al.

### **Conclusion**

The above argued differences in manipulative steps between the claimed inventions and the method disclosed by Claypole et al. undermine the factual determination that Claypole et al. identically describe the claimed invention within the meaning of 35 U.S.C. §102. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc., supra; Kloster Speedsteel AB v. Crucible Inc., supra.* Appellant, therefore, submits that the imposed rejection of claims 1, 2, 4, 9 through 30, 42 through 47, 49 through 57 and 58 under 35 U.S.C. §102 for lack of novelty as evidenced by Claypole et al. is **clearly factually erroneous**.

**3. The Rejection of Claims 1, 2, 4 through 7, 12, 13, 18, 42 through 46, 50, 55, 57 and 58 under 35 U.S.C. §102 for lack of novelty as evidenced by Keller or Evans.**

In the statement of the rejection, the Examiner asserted that each of Keller and Evans discloses a method corresponding to that claimed. The Examiner relegated the house advantage to "...nothing more than a percentage of the wager retained by the house for the privileges of playing the games" (ultimate sentence on page 6 of the November 6, 2001 Office Action). Appellant strongly disagrees.

**The Claimed Inventions**

Basically the Examiner attempts to justify the imposition of the rejection under 35 U.S.C. §102 for lack of novelty by **asserting**, without pointing out, that different elements of the claimed invention are dispersed in the prior art and then rests his case. That cavalier approach does **not** even begin to establish prima facie obviousness under 35 U.S.C. §103 let alone lack of novelty under 35 U.S.C. §102.

The method defined in each of claims 1 and 42 comprises a sequence of manipulative steps requiring initially playing an underlying game of chance and then paying the player a payoff from the underlying game of chance when a winning combination results. That payoff is not affected by the outcome of the subsequent knowledge-based game or by any intervening game. Further, each of independent claims 1 and 42 requires the combined knowledge based and underlying game of chance to have a house advantage within a **predetermined range**, which is set by limits based upon the correctness of the answers and the wager (claim 1) or based on all

answers to all queries in the knowledge-base game being correct, and a substantial portion of the range being a positive house advantage (claim 42). None of these features are disclosed or suggested by Keller or Evans.

### **Keller**

Keller does not disclose, suggest or enable the claimed method, particularly the manipulative step of awarding a payoff or paying the player when a winning combination results in the game of chance, or the notion of a **bonus condition** triggering a skill game, or a house advantage within a **predetermined range**.

Keller addresses the problem of local government restrictions on awarding cash prizes based on success within a game of chance (column 1, lines 27-29). Keller solves this problem "by refraining from the award of cash prizes for success in a game of chance" (Column 1, lines 37 and 38). Instead, Keller awards, based on chance, a **token** that merely **allows** a winner to enter a skill game. Of particular interest is Keller's disclosure that a player will be rewarded for the game of chance in such a manner so as to **not** be able to use his or her winnings to pay for continued participation in the casino game (column 2, lines 38-41). These teachings of Keller are **contrary** to the operation of and, hence, **teach away from** the claimed inventions in a number of ways.

**Firstly**, in Keller's method, there is **no payoff** for success in the underlying game of chance. Not so in the claimed inventions which **require** such a payoff in the underlying game of change.

**Further**, according to Keller's method, a player must pay a fee to obtain chips which are



used to play the game of chance. The player is awarded a **token** to enter a game of skill **only** upon **successful** completion of the game of chance--**no bonus condition**.

Moreover, the bifurcated arcade game of Keller is **not** a casino game being played to have a "house advantage within a **predetermined range**". In contradistinction to Keller's method, the claimed invention ensures a house advantage is attained within a **predetermined range**. Keller is silent on house advantage (as commonly used in gaming). In Keller, presumably the fee is how the operator makes a profit. This is not a house advantage in conventional gaming. House advantage is how the casino operator makes a profit in gaming. The claimed invention is via the self-contained method of play for the game, a true casino game wherein wagers are made and resolved with money or their equivalent, unlike Keller who's solution is to charge an external fee.

Also, within the present invention, the term "house advantage" is used in accordance with the industry accepted meaning that "the house advantage" is a statistical value that reflects the behavior of a game over an extended period of time and relies on continued play and a large number of wagers (page 12, of the written description, lines 9-19). Thus, a bifurcated arcade game such as that taught by Keller, which is not designed for the payout to fund the player's continued participation in the game (and thus provides no encouragement for the player to continue playing without presumably paying an additional fee), is uninterested (and silent!) in any particular house advantage as meant within the present claims and, in particular, is not a combined casino game having a house advantage within a predetermined range.

The bottom line is that Keller does **not** disclose a house advantage<sup>3</sup> **adjusted for**

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<sup>3</sup> Exhibit 1, paragraph 9.

**different entertainment games that have different fees** (column 2, lines 61-67). Keller carefully points out (column 2, lines 32-42 and column 3, lines 1-7) that the disclosed entertainment casino game is not a traditional casino game as his winners are awarded tokens of **no redeemable value**. The player then proceeds to use the tokens that are won to play any one of many separate games of skill (selected by the player). Keller discloses a casino game for entertainment purposes only and, in this regard, **teaches away** from the present invention which requires a payoff from the underlying game of chance **regardless of the outcome** of the knowledge-based game.

Whatever "odds" may nor may exist in the random game contemplated by Keller is confined to that game wherein a **token** is issued, which token may be employed to play the knowledge-based game. **There is no house advantage within a "predetermined range."** Indeed, the underlying game of chance is provided solely for its entertainment value in order to avoid running afoul of governmental restrictions on avoiding a cash prize in a game of chance. Clearly, Keller does not disclose, suggest, or inherently involve a casino game wherein a house advantage in a **predetermined range** is established for **the combined knowledge-based bonus game with the underlying game of chance**.

Further, Appellant would submit that one having ordinary skill in the art would **not** have **recognized** that Keller's two part casino game inherently, i.e., necessarily involves a "house advantage within a predetermined range" predicated upon the combined knowledge-based bonus game with the underlying game of chance, as judicially required. *Elan Pharmaceuticals, Inc. v. Mayo Foundation, supra*; *Crown Operations International Ltd. v. Solutia Inc., supra*; *Finnegan Corp. v. ITC, supra*; *In re Robertson, supra*.

As previously noted, each of independent claims 1 and 42 in Groups I, II, III, and IV

requires cessation of the underlying game of chance upon occurrence of a **bonus condition**. It is **not** apparent and the Examiner has not pointed out wherein Keller discloses the occurrence of a **bonus condition**.

The above argued **differences** in manipulative steps between the claimed methods and Keller's method undermines the factual determination of lack of novelty under 35 U.S.C. §102. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc., supra;* *Kloster Speedsteel AB v. Crucible Inc., supra.*

### **Evans**

Evans discloses a coin or token feed machine comprising a random or quasi random prize generator portion which provides visible representation indicative of the prize to be awarded **upon successful completion of the game of skill**. The first or underlying game is a quasi random prize generated portion which does **not** provide a **payoff**. Rather, the underlying random prize generator portion determines the level of the prize to be awarded **only upon successful completion** of the second game which is the game of skill. It is **not** apparent and the Examiner has **not** pointed out wherein Evans discloses, suggests or enables a method corresponding to that defined in independent claims 1 and 42 of Groups I, II, III, and IV which comprises a sequence of manipulative steps including playing an underlying game of chance and **awarding a payoff** in that underlying game of chance **regardless of the outcome of a subsequent knowledge-based game or any intervening game**. *In re Rijckaert, supra;* *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., supra.* It is also **not** apparent and the Examiner has **not** pointed out wherein Evans discloses, suggests or enables a method corresponding to that defined in independent claims 1 and 42 of Groups I, II, III, and IV comprising initially playing an

underlying game of chance and ceasing playing that underlying game of chance upon the occurrence of a **bonus condition**. *In re Rijckaert, supra*; *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., supra*.

It is also **not** apparent and the Examiner has **not** pointed out wherein Evans discloses or suggests a method as set forth in each of independent claims 1 and 42 of Groups I, II, III and IV involving playing an underlying game of chance and a knowledge-based bonus game which has a house advantage within a **predetermined range**, let alone a predetermined range having set limits based on the correctness of the answers and the wager (claim 1) or a predetermined range having a minimum house advantage based upon all answers to all queries in the second knowledge-based game being correct wherein substantial portion of a range has a positive house advantage (claim 42). *In re Rijckaert, supra*; *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co., supra*. To whatever extent the Examiner is relying upon the doctrine of inherency, Appellant would again stress that inherency require **certainty and art-recognition**, neither of which has been factually established by the Examiner. *Elan Pharmaceuticals, Inc. v. Mayo Foundation, supra*; *Crown Operations International Ltd. v. Solutia Inc., supra*. Appellant notes that in the third full paragraph on page 10 of the November 6, 2001 Office Action, the Examiner refers to Claypole et al. apparently in the context of the rejection predicated upon Keller which appears to be equated to Evans. Suffice to say, the rejection is under 35 U.S.C. §102.

Appellant would further note that in the fourth full paragraph on page 10 of the November 6, 2001 Office Action, the Examiner appears to be of the opinion that "the same issues" exist under both 35 U.S.C. §103 and 35 U.S.C. §102. The Examiner's position is clearly legally erroneous.

## **Conclusion**

The above argued differences in manipulative steps between the claimed inventions and the methods disclosed by each of Keller and Evans undermine the factual determination that Keller or Evans identically describes the claimed methods within the meaning of 35 U.S.C. §102. *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics Inc.*, *supra*; *Kloster Speedsteel AB v. Crucible Inc.*, *supra*. Appellant, therefore, submit that the imposed rejection of claims 1, 2, 4 through 7, 12, 13, 18, 42 through 46, 50, 55, 57 and 58 as found in Groups I, II, III, and IV under 35 U.S.C. §102 for lack of novelty as evidenced by Keller or Evans is **clearly factually erroneous**.

**4. The Rejection of claims 8 through 11, 14 through 17, 19 through 30, 47, 49, 51 through 54, 56 and 58 under 35 U.S.C. §103 for obviousness predicated upon Keller and/or Evans in view of Thompson.**

In the statement of the rejection, the Examiner concluded that one having ordinary skill in the art would have been motivated to modify the method disclosed by each of Keller and Evans by providing random stopping of the game of chance in view of Thompson. In the paragraph bridging pages 7 and 8 of the incorporated November 6, 2001 Office Action, the Examiner relegated the claim limitations on the house advantage, i.e., the set limits, to "obvious matters of design choice", apparently abandoning his previous position on inherency. The requirement for approximate answers (claims 14, 21 and 22) were also engulfed by the rubric "an obvious matter of design choice." Additional limitations found in claims 15 through 17, 23 and 51 through 54 were asserted to be well known and "an obvious matter of design choice", Appellant strenuously

disagrees.

The method defined in each of independent claim 1, upon which rejected claims 8 through 11 and 14 through 17 depend (Group I), independent claim 19 (Group II), independent claim 25 (Group III) and claim 42, upon which rejected claims 47, 49, 51 through 54, 56 and 58 depend (Group IV), comprises sequence of manipulative steps which includes, inter alia, initially playing a game of chance and **awarding a payoff** when a game of chance results in a winning combination **regardless of the outcome of a subsequent knowledge-based game**. These manipulative steps are neither disclosed nor suggested by either of the primary references to Keller and Evans. Further, neither Keller nor Evans discloses or suggests the concept of a house advantage, for a combined knowledge-based bonus game with an underlying game of chance, within a predetermined range, let alone within the limits set in the independent claim. The additional reference to Thompson does not cure the argued deficiencies of Keller and Evans. Ergo, even if the applied references are combined as suggested by the Examiner, a conclusion with which Appellant does not agree, the claimed invention would **not** result. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). Further, Appellant submits the Examiner did not establish the requisite motivation to arrive at the claimed invention.

### **There is no Motivation**

The Examiner did **not** provide a factual basis to support the requisite realistic motivation for combining Thompson with either Keller or Evans. As mandated by the Court of Appeals for the Federal Circuit, in order to establish the requisite motivational element, the Examiner must make a "thorough and searching" factual inquiry and, based upon that factual inquiry, explain

**why** one having ordinary skill in the art would have been realistically motivated to modify particular prior art, in this case Keller's method and the method disclosed by Evans, to arrive at the claimed invention. *In re Lee*, 237 F.3d 11338, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

**Generalizations do not suffice.** *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 57 USPQ2d 1161 (Fed. Cir. 2000); *Ecolochem Inc. v. Southern California Edison, Co.* 227 F.3d 1361, 56 USPQ2d 1065 (Fed. Cir. 2000).

In applying these legal tenets to the exigencies of this case, Appellant submits the Examiner failed to factually establish the requisite motivation. Specifically, Thompson, the allegedly teaching reference, discloses a household game with **no wager or house advantage**. Timers are used that time out during game play. It is **not** apparent and the Examiner has **not** cogently **explained why** one having ordinary skill in the art would have been realistically impelled to **stop** Keller's game, or to stop the game disclosed by Evans, by providing a timer, as disclosed by Thompson. Indeed, **if** Keller's game is modified by providing a timer, no tokens would be paid out and Keller's game would be rendered **inoperative**, since Keller's game must normally conclude with a winning combination before the player receives a token. Similarly, **if** the method disclosed by Evans is modified as suggested by the Examiner by providing a timer, the disclosed method would be **inoperative**, since it would not result in a prize, because the game must be played to completion and a winning combination must be achieved so that the player can play the game of skill to earn a payoff.

It should, therefore, be apparent that **if** the method of either Keller or Evans is modified as suggested by the Examiner, each of the disclosed methods would be rendered **inoperative**. It is well settled that one having ordinary skill in the art would **not** be considered realistically motivated to modify a reference in a manner **inconsistent** with the disclosed objective i.e., to

render it **inoperative**. See, for example, *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992); *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984); *In re Schulpen*, 390 F.2d 1009, 157 USPQ 52 (CCPA 1968).

As to the Examiner's "design choice" rubric, such has been repeatedly judicially condemned as **no substitute for the factual basis and reasoning** required to establish realistic motivation. *In re Chu*, 66 F.3d 292, 36 USPQ2d 1089 (Fed. Cir. 1995); *In re Gal*, 980 F.2d 717, 25 USPQ2d 1076 (Fed. Cir. 1992); *In re Bezombes*, 420 F.2d 1070, 164 USPQ 387 (CCPA 1970).

In the last paragraph on page 3 of the June 24, 2002 Final Office Action, the Examiner asserts that "the mathematics of each game are considered synergistic"--whatever that means in the context of the present case. The Examiner then concluded "[i]t would be routine for one skilled in the art to either determine the house percentage or design the game to a specific house percentage or range." Suffice to say, this approach is **without the requisite factual basis** and inconsistent with the mandate of the Court of Appeals for the Federal Circuit. Appellant would particularly rely upon *Teleflex Inc. v. Ficosa North America Corp.*, \_\_\_ F.3d \_\_\_, 63 USPQ2d 1374, 187 (Fed. Cir. 2002), wherein it was held that:

The showing of a motivation to combine must be clear and particular, and it must be supported by actual evidence.

The Examiner's rejection is long on generalizations but short on facts.

One further point should be noted. In the statement of the rejection, the Examiner uses the expression "and/or" between Keller and Evans. The Examiner has yet to explain **why** one having ordinary skill in the art would have been realistically led to combine these references, let alone **how**.



Based upon the foregoing, it should be apparent that the Examiner did not establish prima facie basis to deny patentability to **any** of the appealed claims in Groups I through IV. Moreover, there is an abundance of evidence of **nonobviousness** which merits consideration.

### **Evidence of Nonobviousness**

#### **1. The problems addressed and solved by the claimed invention.**

It is well settled that the problem addressed and solved by a claimed invention must be given consideration as an indicium of **nonobviousness**. *North American Vaccine, Inc. v. American Cyanamid Co.*, 7 F.3d 1571, 28 USPQ2d 1333 (Fed. Cir. 1993); *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 15 USPQ2d 1321 (Fed. Cir. 1990); *In re Newell*, *supra*; *In re Nomiya*, 509 F.2d 566, 184 USPQ 607 (CCPA 1975). The Examiner has clearly ignored this potent indicium of **nonobviousness**.

Specifically, a first problem addressed by the present invention is to ensure house viability in the presence of a perfect knowledgeable player, under the regulatory guidelines requiring each game to be the result of a random, independent process as imposed in the United States.<sup>4</sup> A second problem addressed by the present invention is to provide a fair game to a player with no knowledge, i.e., without a prohibitively high house advantage.<sup>5</sup>

The first problem is solved by setting a house advantage for the casino game over time, and mathematically based on random, independent events as produced, for example, in the random number generator 50 illustrated in Fig. 1. The solution to the second problem is

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<sup>4</sup> Exhibit 1, paragraph 6.

<sup>5</sup> Exhibit 1, paragraph 7.

achieved by setting a house advantage for the player who always guesses at an answer.

It is **not** apparent and the Examiner has **not** identified wherein any of the applied references addresses the above noted problems or remotely offers a solution to such problems, particularly the solutions embodied in the claimed inventions. Under such circumstances, the problems addressed and solved by the claimed inventions constitute potent indicia of **nonobviousness**.

### **The Declaration Evidence**

The Vancura declaration executed May 18, 2002 (Exhibit 1) merits consideration not only with respect to the **problems** addressed and solved by the claimed invention, but also for the **expert interpretation** of the applied references, notably the interpretation set forth in paragraphs 9 and 10, which ought to carry more weight than the unsupported assertions of the Examiner with respect to inherency. *In re Alert*, 579 F.2d 86, 198 USPQ 210 (CCPA 1978); *In re Meg*, 492 F.2d 843, 181 USPQ94 (CCPA 1974).

The Declaration of Grochowski (Exhibit 2) executed April 23, 2001, notably in paragraph 2, constitutes evidence of long felt need, which is an indium of nonobviousness. *Ecolochem v. Southern California Edison*, *supra*. Significantly, in paragraph 3, Grochowski clearly establishes the skepticism of an expert in the art, which is another potent indicium of **nonobviousness**. *Luis v. A.B. Chance Co.*, *supra*; *Environmental Designs, Ltd. v. Union Oil Company of California*, 713 F.2d 693, 218 USPQ2d 865 (Fed. Cir. 1983).

The Declaration of Gushin executed May 31, 2001 (Exhibit 3) further evidences the nonobviousness of the claimed invention. In paragraph 3 of the Gushin declaration, the Declarant states:

I was very surprised and intrigued to find such features available, as I previously did not believe it was possible to include such a knowledge-based component in a casino game and still have the game adhere to the necessary house advantage requirements of North American Gaming Jurisdiction.

Again, the expressions of disbelief by experts, merit consideration as strong evidence of **nonobviousness**. *Luis v. A.B. Chance Co., supra*; *Environmental Designs, Ltd. v. Union Oil Company of California, supra*.

### 3. Commercial Success

The article "Best of Slots 2002" appearing in the publication "Strictly Slots", of October 2002, page 42, (Exhibit 4) contains the results of an-extensive ballot mailed out to its readers to pick their favorites. "Ripley's Believe It or Not!" won in the MOST INNOVATIVE VIDEO SLOT category. Strictly Slots stated "We love Mikohn's version of Ripley's Believe It Or Not because it gives us the chance to prove we're know-it-alls. ***As the first game that actually rewards for trivia,*** we can't wait to see the machines they come up with next." (emphasis added) Id. At 48.

The article "The Future of Slots" also appearing in Strictly Slots in the September 2002 issue, page 51, (Exhibit 5) states "It can be said that Mikohn ***truly revolutionized slot play ... with the first knowledge-based slot,*** Ripley's Believe It or Not! Adventures in Trivia.(emphasis added) Id.

That the games mentioned have actually been implemented in casinos and merit notice by experts in this field, despite the established skepticism, speaks strongly of nonobviousness. *Luis v. A.B. Chance Co., supra*.

It should be apparent from the above publications that casino games comprising a combined knowledge-based bonus game with an underlying game of chance with a house advantage within a predetermined range, encompassed by the claimed inventions, have been successfully implemented and, hence, enjoy commercial success. *Applied Materials v. Advanced Semiconductor Materials of America* 98 F.3d 1563, 40 USPQ2d 1481 (Fed. Cir. 1996). Such commercial success has been achieved in the face of skepticism and longfelt need. *Luis v. A.B. Chance Co.*, *supra*; *Ecolochem v. Southern California Edison*, *supra*.

### **The Examiner's Superficial treatment of the Evidence of Nonobviousness**

The June 24, 2002 Final Office Action **ducks the evidence of nonobviousness**. The Examiner does, however, mention the declarations in the paragraph bridging pages 10 and 11 of the November 6, 2001 Office Action. The Examiner would fault the declarations by asserting there is no evidence of the discovery of the source of the problem.

Firstly, the **Examiner never denied** Appellant recognized, addressed and solved the mentioned problems. Secondly, the Examiner cited **no authority** to justify requiring evidence of problem recognition, particularly under the facts of this case. It is **undisputed that** Appellant addressed and solved existing problems.<sup>6</sup> Nor does the Examiner gainsay that a longfelt need existed for solutions to the problems addressed and solved by the present invention. Accordingly, the Examiner's requirement for proof of the discovery of a source of a problem **misses the point**.

In the paragraph bridging pages 10 and 11 of the November 6, 2001 Office Action, the Examiner states that house advantages are known. The Examiner, however, **does not provide any factual basis** to arrive at a house advantage for a combined knowledge based and underlying

game of chance **within a predetermined range**, let alone the limits defined in the independent claims. *In re Lee, supra*. The Examiner would then downplay the invention by stating that the house advantage "is **simply** a quantification of all that is known and old to the consideration of house percentage in the design of a wagering game" (emphasis supplied).

Appellant would respond by underscoring the lack of facts and reasoning. Appellant would further argue that the Examiner's attempt to arrive at obviousness by asserting lack of complexity is misguided. It has been held that lack of complexity constitutes evidence of **nonobviousness**. *In re Van Wanderham*, 378 F.2d 981, 154 USPQ 20 (CCPA 1967); *In re Sporck*, 301 F.2d 686, 133 USPQ 360 (CCPA 1962). The law is clear-simplicity is not synonymous with obviousness. *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 421 F.2d 1563, 220 USPQ 97 (Fed. Cir. 1983); *Continental Can Co. USA, Inc. v. Monsanto Co.*, 948 F.2d 1264, 20 USPQ2d 1746 (Fed. Cir. 1991).

The bottom line is that the Examiner challenges the objective evidence of nonobviousness in pretty much the same way he attempts to establish obviousness-generalizations but no facts.

### **Conclusion**

It should, therefore, be apparent that a prima facie basis to deny patentability to the claimed invention under 35 U.S.C. §103 for Groups I through IV has not been established. Moreover, upon giving due consideration to the potent indicia of **nonobviousness**, the conclusion appears inescapable that one having ordinary skill in the art would **not** have found any of the claimed inventions obvious **as a whole** obvious within the meaning of 35 U.S.C.

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<sup>6</sup> See *In re Clinton*, 527 F.2d 1226, 188 USPQ 365 (CCPA 1976).

§103. *In re Piasecki*, 745 F.2d 1468, 223 USPQ 785 (Fed. Cir. 1984). Appellant, therefore, submits that the imposed rejection of claims 8 through 11, 14 through 17, 19 through 30, 47, 49, 51 through 54, 56, 58 under 35 U.S.C. §103 for obviousness predicated upon each of Keller and Evans in view of Thompson is not factually or legally viable.

**5. The rejection of claims 130 through 132 under 35 U.S.C. §103 for obviousness predicated upon Walker, Claypole et al., Keller and Evans "further in view of matters well known to mathematics and gaming."**

The statement of the rejection for the Group V claims appears on page 2 of the June 24, 2002 Final Office Action and reads as follows:

The above references fail to discuss the house percentages claimed. The house percentage in chance game such as slots relates to mathematics well known to one skilled in the art of gaming. When a "basic game" is combined with a "secondary game", the mathematics of each game are considered synergistic. It would be routine for one skilled in the art to either determine the house percentage or design the game to a specific house percentage or range. As such to have designed the house percentages as called for in claims 130-132 is considered an obvious matter of design choice in order to set the profit desired by the house.

Appellant strongly disagrees.

As previously argued, none of the applied references discloses or suggests the concept of a house advantage for a combined knowledge-based bonus game and underlying game of chance to be within a predetermined range, let alone a range which has a minimum house advantage based upon all answers to all queries in the second knowledge-based game being correct, and a substantial portion of the range being a positive house advantage. Certainly not the particular ranges specified in claims 130 through 132. As previously noted, the Examiner's invocation of

the "obvious matter of design choice" rubric is **legally erroneous**. *In re Chu, supra*; *In re Gal, supra*; *In re Bezombes, supra*. Again, the Examiner's rejection is long on generalizations but short on the requisite facts. *Teleflex Inc. v. Ficosa North America Corp., supra*; *In re Lee, supra*.

Further, Appellant would rely upon the previously discussed evidence of **nonobviousness**, including the problems addressed and solved by the claimed invention, the declaration evidence and the evidence of commercial success. The absence of a prima facie case, exacerbated by the argued indicia of **nonobviousness**, compel the conclusion that one having ordinary skill in the art would **not** have found the claimed invention **as a whole** obvious within the meaning of 35 U.S.C. §103. *In re Piasecki, supra*.

Appellant therefore, submits that the imposed rejection of claims 130 through 132 in Group V under 35 U.S.C. §103 for obviousness predicated upon Walker, Claypole et al., Keller and Evans "further in view of matters well known to mathematics and gaming" is factually and legally erroneous.

#### **IX. PRAYER FOR RELIEF**

Based upon the arguments submitted supra, Appellant submits that the Examiner's rejections are not factually or legally viable. Appellant, therefore, respectfully solicits the Honorable Board to reverse each of the Examiner's rejections under the 35 U.S.C. §102 and 35 U.S.C. §103.

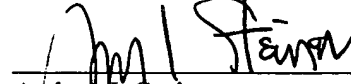
To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess

Serial No. 09/875,753

fees to such deposit account.

Respectfully submitted,

McDERMOTT, WILL & EMERY

A handwritten signature in black ink, appearing to read 'Arthur J. Steiner', is written over a horizontal line.

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# APPENDIX

1. A method for playing a casino game comprising:  
receiving a wager for the casino game,  
playing an underlying game of chance in the casino game,  
awarding payoffs when play of the underlying game of chance results in a winning combination,  
playing a knowledge-based bonus game in the casino game using answers from a player when a bonus condition occurs in the underlying game, playing the knowledge-based game after playing the game of chance without any intervening game which would affect the payoff of the game of chance, the play of the knowledge-based game having a bonus payoff separate from the payoffs awarded in the play of the underlying game of chance so that the entitled payoffs are made for the underlying game regardless of the outcome of the knowledge-based game, the combined play of both the knowledge-based bonus game with the underlying game of chance over time having a house advantage for the casino game within a predetermined range, the predetermined range having set limits based on the correctness of the answers and the wager.
2. The method of claim 1 wherein the underlying game of chance is a slot game.
4. The method of claim 1 further comprising the step of restarting the play of the underlying game of chance when the play of the knowledge-based bonus game is over.
5. The method of claim 1 wherein the bonus condition is one of the following: the appearance of a bonus symbol in the step of playing of the underlying game of chance or a random number of wagers received in the step of receiving.
6. The method of claim 1 the bonus condition occurs unrelated to the play of the underlying game of chance, the bonus condition being one of the following: the timing out of a random timer in the play of the underlying game of chance or an appearance of a number in a random roll of dice after the play of the underlying game of chance.

7. The method of claim 1 wherein the bonus condition occurs at a known frequency.

8. The method of claim 1 wherein the bonus condition is randomly chosen at a known frequency.

9. The method of claim 1 wherein one of the set limits is based upon all answers in the knowledge-based bonus game are always correct.

10. The method of claim 1 wherein one of the set limits is based upon all answers in the knowledge-based bonus game are always guessed at.

11. The method of claim 1 wherein the predetermined range is positive.

12. The method of claim 1 wherein the step of playing the knowledge-based game further comprises the steps of:

- (a) providing at least one query to the player in the knowledge-based game,
- (b) receiving at least one answer from the player in response to the provided query,
- (c) paying the player based upon the at least one answer.

13. The method of claim 12 wherein the at least one query is a multiple choice question having only one of the multiple choices correct.

14. The method of claim 12 wherein the at least one query is a query requiring a proximate answer.

15. The method of claim 12 wherein the at least one query is a multiple choice question having at least one of the multiple choices correct.

16. The method of claim 12 wherein the at least one query is a puzzle having a forced outcome.

17. The method of claim 12 wherein the at least one query is a true/false question.

18. The method of claim 12 wherein the step of paying the player further comprises the steps of:

paying the player a first amount when the player correctly answers the at least one query,

paying the player a second amount when the player incorrectly answers the at least one query.

19. A method for playing a combined knowledge-based bonus game with an underlying casino game of chance, the method comprising:

receiving a wager,

playing the underlying casino game of chance,

stopping play of the underlying casino game of chance,

paying the player when a winning combination occurs in the underlying casino game of chance,

playing the knowledge-based bonus game when the underlying casino game of chance is stopped and a bonus condition occurs in the underlying game, the steps of playing the knowledge-based game at least comprising:

(a) providing at least one query to the player in the knowledge-based game,

(b) receiving at least one answer from the player in response to the provided at least one query,

(c) paying the player based upon the at least one answer by the player,

(d) paying the player the entitled payoff of the underlying game regardless of the outcome of the knowledge-based game,

(e) playing the knowledge-based game after playing the game of chance without any intervening game which would affect the payoff of the game of chance,

providing a house advantage within a predetermined range for the combined knowledge-based bonus game and underlying casino game, the predetermined range having a set limit based at least upon all answers to all queries in the knowledge-based game are always correct and the wager.

20. The method of claim 19 wherein the at least one query is a multiple choice question having only one of the multiple choices is correct.

21. The method of claim 19 wherein the at least one query is a query requiring a proximate answer.

22. The method of claim 19 wherein the at least one query is a multiple choice question having a plurality of the multiple choices correct.

23. The method of claim 19 wherein the at least one query is a puzzle having a forced outcome.

24. The method of claim 19 wherein the step of playing the player further comprises:

paying the player a first amount when the player correctly answers the at least one query,

paying the player a second amount when the player incorrectly answers the at least one query.

25. A method for playing a combined knowledge-based bonus game with an underlying casino game of chance, the method comprising:

playing the underlying casino game of chance,

awarding payoffs when play of the underlying game of chance results in a winning combination,

playing the knowledge-based bonus game when play of the underlying game of chance stops and a bonus condition occurs in the underlying game, the play of the

knowledge-based bonus game being separate from the underlying casino game of chance so that the entitled payoffs are made for the underlying game regardless of the outcome of the knowledge-based game, playing the knowledge-based game after playing the game of chance without any intervening game which would affect the payoff of the game of chance,

the steps of playing the knowledge-based game at least comprising:

- (a) providing at least one query to a player in the knowledge-based game,
- (b) receiving at least one answer from the player in response to the provided

at least one query,

- (c) paying the player based upon the at least one answer received,

the separate play of the knowledge-based bonus game with the underlying casino game having a house advantage in a range from a first set limit based on all answers to all queries are correct to a second set limit based on all answers to all queries are guessed.

26. The method of claim 25 wherein the underlying casino game of chance is a slot game.

27. The method of claim 25 wherein the step of playing the knowledge-based bonus game is based upon the bonus condition related to the play of the underlying casino game.

28. The method of claim 25 wherein the step of playing the knowledge-based bonus game is based upon the bonus condition occurring unrelated to the play of the underlying casino game of chance game.

29. The method of claim 25 wherein the step of playing the knowledge-based bonus game is randomly chosen at a known frequency.

30. The method of claim 25 wherein the step of playing the knowledge-based bonus game is randomly chosen at a known frequency.

42. A method for a casino game comprising:  
providing a first game of chance,  
paying the player a payoff when a winning combination results in the game of chance,  
providing a second knowledge-based game,  
playing the first game of chance having a positive house advantage,  
stopping play of the first game of chance when a bonus condition occurs in the first game of chance,  
playing the second knowledge-based game using answers from a player when the first game is stopped, paying the player the entitled payoff of the underlying game regardless of the outcome of the knowledge-based game,  
playing the knowledge-based game after playing the game of chance without any intervening game which would affect the payoff of the game of chance,  
providing a house advantage within a predetermined range for the combined second knowledge-based game and the first game of chance wherein the predetermined range has had a minimum house advantage based upon all answers to all queries in the second knowledge-based game being correct, and a substantial portion of the range being a positive house advantage.

43. The method of claim 42 further comprising the step of returning to the play of the first game of chance when the play of the second knowledge-based game is over.

44. The method of claim 42 wherein the first game of chance is a slot game.

45. The method of claim 42 wherein the step of stopping the first game of chance is based upon a condition occurring in the play of the first game of chance.

46. The method of claim 42 wherein the step of stopping the first game of chance is based upon a condition occurring unrelated to the play of the first game of chance.

49. The method of claim 42 wherein the upper limit of the house advantage range is based upon all answers to all queries in the second knowledge-based game always being guessed at.

50. The method of claim 42 wherein the step of playing the second knowledge-based game further comprises the steps of:

- (a) providing at least one query in the second knowledge-based game,
- (b) receiving at least one answer in response to the provided query,
- (c) paying based upon the at least one answer.

51. The method of claim 50 wherein the at least one query is a multiple choice question having only one of the multiple choices is correct.

52. The method of claim 50 wherein the at least one query is a query requiring a proximate answer.

53. The method of claim 50 wherein the at least one query is a multiple choice question having at least one of the multiple choices correct.

54. The method of claim 50 wherein the at least one query is a puzzle having a forced outcome.

55. The method of claim 50 wherein the step of paying the wager for the second knowledge-based game further comprises:

paying a first amount when the correct answer is provided for the at least one query,

paying the second amount when the incorrect answer is provided for the at least one query.

57. The method of claim 42 wherein the step of playing the second knowledge-based game provides only one query.



58. The method of claim 42 wherein the step of playing the second knowledge-based game provides at least one query.

130. The method of claim 42 wherein the minimum house advantage of the range is about -3%.

131. The method of claim 42 wherein the predetermined range is about -3% to about 20%.

132. The method of claim 42 wherein the minimum house advantage of the range is about zero.